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GEOGRAPHY AND VISUAL EDUCATION

G. J. CONS, M.A.

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GEOGRAPHY AND VISUAL EDUCATION

G. J. CONS, M.A.

The young child has a keen and lively eye for the changing scene of sky, land and sea. Equally fresh and alive is the "seeing" eye of the child when observing the human scene, where Man is in action in the street, in the shop and in the factory, in the field and on the farm. It is a prime problem of geographical teaching to keep alive, from childhood to youth, the pristine quality of this early curiosity that is fascinated by the magic of the earth and the drama of Man's work. Too often the first flush of active and spontaneous curiosity is spent and withered by the time the child reaches the secondary school.

We need to tend with more thought and care this precious quality. It can thrive only by its right direction and exercise in that patch of the earth where the children can have first hand contact with the actualities of the natural and social world. That place is the local habitat, the home territory, the neighbourhood, the village, the town and the region. Here, in the back street world of our urban areas and in the village of our countryside the child can see, hear and feel the things and people which are the very stuff of geography. There can be no visual aids or substitutes for this first hand experience. The process of visualisation which sustains geographical thinking, unless vitalised by first hand experience and observation, will be feeble and anaemic. This is the important truth. The efficiency and fruitfulness of all our visual methods of teaching will rest ultimately on the range of first hand experience and observation which supplies the frame of reference and keeps alive this fundamental curiosity in geographical phenomena.

Confined solely to a classroom study the geography of a changing world too readily becomes a series of chapters in a text book. It remains unreal geographically no matter how you deck it out with pictures and charts and support it by films. Geography is the study of a living world and only by long spells out of the classroom, in the "field," and by first hand visual contact with the facts of nature and the works of Man can we hope to develop the sense of geographical reality on which the value of visual methods for the extension of geographical experience finally rests.

The foremost concern of the teacher of geography is, therefore, that he should guide the young explorers towards gathering worthwhile geographical experience in the local habitat. He should, indeed, follow Milton who, near the end of his Tractate in Education suggests, with great insight, that towards the close of their career at his academy, youth should be encouraged " to ride out in companies with prudent and staid guides to all quarters of the land ; learning all places of strength, all commodities of building and of soil, for towns and tillage, harbours and ports of trade." In these days especially, our youth needs this wider experience of our varied physical and cultural landscapes ; in the Pennines, the Lake District, the Welsh Mountains, Dartmoor and Exmoor, the Downs, in the plain and valley country, in the coastal areas, and in the industrial regions. We need it sorely so that before the facts of our geography are treated as abstract matters they are felt and lived through as concrete experiences. These expeditions can be arranged in school time and in the holidays or as Milton wrote : " In those vernal seasons of the year when the air is calm and pleasant it were an injury and sullenness against nature not to go out and see her riches and partake in her rejoicing with heaven and earth." To some, these expeditions, both local and regional, afford the true visual education when the eye, in close contact with the actual landscape, is trained to see, to select, to admire, to appreciate, and later to visualise accurately by means of map and picture.

But no geographer can have travelled and observed the whole earth in his quest for geographical knowledge so that he might have gained such power as to say : " I swung the earth a trinket at my wrist." To encompass the earth, he needs to cultivate the " visualising eye " which " would sweep over gradually widening areas until at last it embraced the entire earth." To recreate in the mind's eye one of those widening areas, unvisited and unexplored, the process of visualisation must operate and derive its images from map, picture and descriptive and scientific source, so that from the mixed flow of images in the stream of visualisation there may emerge significant patterns of relief and drainage, of structure, of settlements, and of other features of the area. To embrace the entire earth and to achieve the final vision of terrestrial unity demands the master effort of a trained geographical imagination. Such vision is vouchsafed only to the geographer who is a trained visualiser in a global dimension.

In these days, our children are restricted even in their local and regional travels, and thus their first hand experience of geographical phenomena is very limited. They will need the power of the " visualising eye " to extend their geographical knowledge of those parts which are remote from their experience. Again they have the necessary endowment. The majority of children are born visualisers. In the appendix of the Report of the Consultative Committee on " The Primary School," Sir Cyril Burt writes : " During the later stage of primary education the majority of pupils appear to be

visualisers. They imagine things with the mind's eye. If the teacher could penetrate into the consciousness of such a child, he would find the child's thoughts unrolling themselves before him rather like a cinematographic film. Within the teacher's mind the film is probably a talking film, and the film itself is less clear than the talk—the chief talker being the teacher himself, without troubling to call up concrete visible pictures. What is presented or suggested in the child of this age, then, should be presented or suggested in concrete, pictorial, and visible form. Towards adolescence there seems no doubt that the power, or at any rate the habit of visualisation tends to diminish ; and the more intelligent children tend to think in terms of words rather than in terms of concrete images. How far this is due to the verbal and bookish character of current instruction need not be discussed here."

From this authoritative statement it is clear that the majority of young children up to the age of eleven years learn in visual terms, and even though visualising power tends to diminish in adolescence, in the habit of visualisation can be cultivated by proper exercise. The training in this process of visualisation is the secret of all good teaching of geography. But it must be well based in first hand experience and observation, and then nourished and supported by visual material, the different classes of which are described below.

First, there is the power of words to evoke visual images. On the childrens' return from some local exploration, or from some kind of regional survey or field work, the teacher of geography will ask the fundamental question, " What went ye out for to see," and the children will be required to express, at least in part, what they saw in words. The " visualising eye " will picture the journey, and the visual images will take shape in words, or at times in sketches. In the same way the teacher will use verbal descriptions to bring alive in the mind's eye of the children such geographical scenes as the forest of the Amazon Valley, rice cultivation in the Lower Ganges Valley and sheep farming in the Lake District. Great geographers are masters of verbal description and from these we should learn the qualities of descriptive style. Again I draw upon the writings of Sir Halford Mackinder to exemplify this process of verbal visualisation, the word-picture, so that image follows image with artistry and with scientific precision—the " visualising eye and the rationalising eye " seeing the object in focus to give us geographical truth. Let us take " Britain and the British Seas " down from our shelves, read a few sentences, and note the marriage of fact and image, so that together they live in the mind and evoke a real world. Read the opening words of the book : " Before the great geographical discoveries of the fifteenth and sixteenth centuries, the known lands lay almost wholly in the Northern Hemisphere and spread in a single continent from the shores of Spain to those of Cathay. Britain was then at the end of the world—almost out of the world. At one point her white cliffs might be seen from the

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mainland, and from this she stretched, northward and westward away from the life of Europe to the dark rocks and bird haunted skerries where the Celt listened to the waves rolling in from the unknown. No philosophy of British history can be entirely true which does not take account of this fact. During two thousand years Britain was at the margin not in the centre of the theatre of politics, and for most practical purposes her position was accurately shown in the maps of the Greek geographers and in the fantastic charts of the mediaeval monks." And the following, taken from that great chapter on " Metropolitan England " —" London is placed where the road from the Continent through Kent, confined between the Thames marshes and the Wealden forest, emerges on the banks of the river at the head of the Estuary. London Bridge is the pith and cause of London. Below, either on the north side or to the south, and often on both, are flats of alluvium, with a breadth of at least three miles. In the earlier centuries high tide converted these into an arm of the sea, replaced at low water by a reedy fen, through which the river wound with uncertain course. The tributary flow of the Lea was through a similar though narrower marsh bottom, and the Isle of Dogs was the Lea delta, compelling the Thames to cut a bluff into the Greenwich rise on the southern shore. Thus London stood on an angle of solid ground, with tidal marsh to east and south of it across which roads were afterwards brought on the Hackney and Newington causeways." For the audience for whom this book was intended, do such descriptions need any support from pictures ? Sir Halford Mackinder evidently felt his geographical eloquence was adequate since there is not a single illustration in " Britain and the British Seas " !

When Mr. Fairgrieve states, with profound insight, that the aim of the teaching of geography is to train children " to imagine accurately the conditions of the earth's stage " we know he is assuming a training in accurate observation and asking, among other things, for the accurate use of geographical terms and words that may evoke the accurate image, as exemplified in the passages quoted. The stages of development of this accurate imagining from the perceptual to the conceptual level and the methods of training in accordance with age cannot be fully discussed here, but the teacher's style of description used in the classroom is vital to the growth of geographical visualisation in the child. The wealth of visual aids should not divert us from the truth that the teacher's spoken word, his verbal description, if accurate and lively, has an immediacy and intimacy not possessed by picture and film in themselves. Indeed such visual media as picture and film are enhanced in their value when used to fortify the geographical description of a teacher who has developed a sense of style.

Though there are no pictures in " Britain and the British Seas," it abounds in significant maps which appear on almost every page. And the reason is that the geographic mode of record is a map, a

record in visual terms. As such it gives not only a visual representation of the geographical scene but in the technique of the geographer's exposition becomes an integral part of the process of visualisation. Thus map and description are interdependent and constitute the geographer's style. If, as in the case of Mackinder's work, the descriptive style is beautiful, readable and connected, the maps must match it in their cartographic style.

As Mr. Fairgrieve states, " It is probably true to say that ninety-nine per cent. of geography can be put on a map. There is only one per cent., a very small part of geography, though it may be the most important part, that cannot be represented on maps." Of this, most teachers of geography are aware and it is well to emphasise the primacy of this " visual aid " in our teaching. The map is essential to the process of visualisation. A test of the good geography teacher is the insight he brings to training children in map construction and map reading so that they will turn readily to a good atlas when discussing the affairs of the world and use it intelligently. In the sheets of our Ordnance Survey, whose artistry they have learnt to appreciate and praise, children visualise readily the landscape, its land form and life. All teachers of geography are aware that a graded map course is necessary through the primary to secondary stage and the visual notation of maps in their frame of reference of scale and projection can only be learnt by much map-making and map-reading.

The reading of a map is an important part of that geographical literacy of the well-informed citizen which our teaching of geography in schools is endeavouring to create. But how often is the geography teacher starved of the essential map equipment he needs and is denied the special room for geography without which he cannot do his job in creating a sense of maps. The geography room in any school should be its map room. Here, by a changing exhibition, the teacher can influence his pupils to appreciate maps and realise their value and artistic merits.

As a centre piece should be the globe. We need the geographical insight and eloquence of Professor E. G. R. Taylor, who is re-awakening teachers of geography to the significance of the globe in the teaching of the geography of the " air age," to deal adequately with its place in the visualisation of terrestrial unity. If for five generations the rolling globe had been available to every American classroom instead of the world on the Mercator projection with America flanked on the west and east by the vast stretches of the Pacific and Atlantic oceans, the political isolationism of some American minds might never have arisen. We must remember that the globe and the map as visual media have great power over the imagination and, if wrongly applied in teaching, can create and fortify a wrong notion that may have serious consequences in the political thinking of the world.

Not only the map but also the photographic picture are means of recording geographical facts and both types of record, the cartographic and the pictorial, become in turn important and indispensable sources of geographical data. Each demands its appropriate

place in the teaching of geography and its own technique of training and interpretation. In the picture there is not only a record of particular geographical facts but the pictorial representation gives a touch of realism to the geographical scene which is a great aid to the process of visualisation.

The still picture in whatever form, as photographic print, lantern slide, or film-strip, has the special function of depicting the relatively static aspects of the landscape. Its function is to give a visual record of the anatomy of a landscape such as an Alpine Valley—the form of the valley, the hanging valleys, alluvial fens and other physical detail as well as the distribution of plant cover and the arrangement of settlements. Such a series of pictures can be analysed and the facts described in their right relationship, giving at the appropriate age visual support to the reading of the large scale map of the valley. This analysis and interpretation of still pictures again demands a graded course from the primary to the secondary stage ; in such a course the aerial photograph would have an important place. The film-strip offers unique opportunities for this course in picture reading and gives the necessary visual support to our treatment of geographical phenomena in all its aspects.

Nevertheless, it is obvious that cinematography has extended the scope of the picture as a geographical record. By reason of its technique it can bring together in rapid succession the aspects of a region that are widely separated in space, and by " close-ups " and other devices it can give emphasis and select significant detail. Above all, it can capture movement. We can try to bring life to the still picture of the Alpine Valley by describing as vividly as we have the power the transhumance of Alpine economy. But where movement and kinetic phenomena predominate, the film is the appropriate aid to the process of visualisation.

In branches of geography such as physical geography there is undoubtedly a place for an accurate film record of selected phenomena, made under controlled scientific conditions. Such scientific records may be made also in other branches of the subject. These films of the strict scientific type will become an aid in the collecting and observing of geographical data. But at the moment little has been done in this scientific use of the film for research purposes.

It is possible, too, to make a moving photographic record of an Alpine Valley in terms of its geographical categories of relief and structures, natural vegetation, economic and other activities. Such a " panoramic " film has its own uses. Many geography films available from various sources approximate to this type.

The moving picture can be, and indeed should be, more than a succession of " shots " of parts of a landscape or region. It is limiting the true idiom of film to restrict it merely to a photographic record of events. Films can be used not only for scientific record but also for interpretation. The geographer observes and measures, analyses and interprets.

The unit of study in geography is a region. In the study of a region a scientific analysis of its parts is necessary and the geographical categories of its relief and structure, climate and so on must be investigated scientifically. But the region is more than the summation of its parts ; it has a unity that springs from their interrelation.

In a word, the region has personality. It is in the presentation and interpretation of this regional personality that the creative imagination of the trained geographer is called into play. In the selection of relationships, in the placing of emphasis and in the capturing of the spirit of the place and its people, a distinctive type of artistry is required. Such artistry is a quality of the great masters of geographical thought and style, but most teachers of geography feel the need of help in the interpretation of regional experience. It is just here that the film can be the greatest aid to the study and teaching of geography.

So conceived, the geographical film of a region should be something more than a scientific record of its geographical facts. It must be able to evoke an appreciation of the " genius loci." The region, to achieve this, should be visualised in terms of movement and the idea that regions may be conceived according to patterns of daily and seasonal rhythms is helpful in its cinematographic interpretation. There are, too, important interruptions of rhythm, associated with climatic irregularities, with biological factors such as locust plagues and disease epidemics and with catastrophic structural factors such as earthquakes and volcanic eruptions. For the filming of a region, its most significant rhythms, daily and seasonal, must be carefully selected and then arranged, supported if necessary by animated diagrams, in an appropriate manner to give unity.

Between these two extremes in the exploitation of the power and resources of the film for geographical teaching, there are other types of films of great teaching value. In our teaching we are obliged to aid children in visualising many processes that come within the different categories of the subject. In dealing with agriculture, for example, children, especially the urban dwellers, need to appreciate the main farming processes—ploughing, harrowing and the like. Here is the place for the short silent film running usually for less than five minutes, which can be run into a lesson once, twice, or even three times and stopped as frequently as desired so that the process is fully understood. All teachers of geography need a small library of such " process " films. The number required is legion and at the moment few are available.

The next type of film may be called " instructional " ; though we deprecate any rigid attempt at classification since research and experiment in the use of geographical films does not permit us yet to discuss even the basis of classification. We have in mind the film that is made according to some method of the teaching of geography ; the film being forced into an instructional pattern according to the nature of the topic. Usually these films are plain, straightforward statements cast into a logical pattern. They are both silent

and sound with commentary, and animated diagrams and maps are used often with valuable effect. Generally these films run for about ten minutes and can be shown if necessary, twice in a lesson. The topics treated usually take the form of some economic activity in a regional setting, and they often possess some of the virtues of the regional type of film described above. In this class of film there is an opportunity for experiment, especially along the lines of posing a problem to be solved which demands besides visualisation some inferential thinking.

Charts and diagrams made to aid the visualisation of statistics and to illustrate ideas have assumed rather a limited conventional pattern. Too often the chart is no more than a series of bar graphs or circles of different sizes. There is room here for some original thought and artistry. Many of our adolescents need the support of charts and diagrams when endeavouring to perceive a number of relationships, especially those of a causal nature. The study of the techniques of mass education in the exploitation of picture, symbol and arrangement of shapes to convey information will be helpful in the development of new ideas in charts and diagrams.

Models, the use of specimens and visits to museums, each have their own place in the process of visualisation. With these, we have run through the gamut of the visual aids in the teaching of geography. The variety of such aids and the wealth of material they supply will be encouraging to those who wish to make more concrete the teaching of geography, introducing the breath of reality to liven our teaching. But this very wealth and variety may, if not treated with care, embarrass our teaching. All these aids must be kept well under control. Each should have its appropriate place, remembering at the same time that they are all contributing to the growth of the " visualising and rationalising eye ". Our children will then go out into the world with a geographical outlook that helps them to picture and to understand " the conditions of the earth's stage " where humanity is endeavouring to work out its salvation.

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